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Yannis Tsividis as a role model for reversing the negative spiral of basic circuits and systems education

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It is acknowledged worldwide over the past several decades that the basic education of circuits and systems (CAS) is not in stable water. A first reason is that smart phones, ipads, internet and computers have created expectations of instant gratification among the youngsters. This has reduced the attention span of students, so that they are not prepared to lengthy lectures that traditionally dominated the conceptual elements of CAS education. This also reflected into a lack of respect in the EE departments, so that basic CAS courses are often assigned to uninterested or unmotivated teachers. Even the research in CAS basics is not in the mainstream at many universities. However, the role of basic CAS is still central in the basic education with many concepts that are essential for every EE bachelor student: transfer function, impulse response, time constant, Bode diagram, impedance, ..

Much earlier than most of us, Yannis Tsividis had deep insight in this new configuration [1]. His courageous and wise approach was to excite the interest of students by a first lab on circuits. Such a lab can have a deep impact on the students by illustrating the many concepts of CAS, even before they are introduced in theoretical courses. Its effect was to reverse the negative trend in EE and double enrollment in EE at Columbia University in three years. The success has stimulated several universities to adopt this role model. Also within the IEEE CAS Society his contagious ideas have stimulated the start of a new Technical Committee CASEO CAS education and outreach.

reference:

Y. Tsividis, "Turning students on to circuits", *IEEE Circuits and Systems Magazine*, First Quarter 2009, pp. 58-63.